

## **REMARKS – General**

### **On The Title Objection**

The title has been written to clearly indicate the invention to which the claims are directed.

### **On Claim Objections**

Claim 7 has been canceled. The newly entered claims have been formatted consistently in compliance with the objection.

### **On Claim Rejections**

This invention is for normal people to operate with hands and can be as productive and convenient as using the regular keyboard and mouse but without the strain, the pain, and the injuries. All the prior art references cited were for people to operate without using their upper limbs, i.e., mainly for the physically handicapped. The novelty in the structures and usages are thus resulted from this major difference of purposes. 3 of the novel features have been found to be significantly different from every cited references and can make the base claims patentable. These 3 features are (1) hand operation of the light source (2) no time delay or extra switch mechanism needed for selection of signals (3) a dedicated sensor used as a lock switch and an operation logic for achieving simultaneous validity of the signals from multiple sensors. These issues are further described in detail in the following answers to each and every rejection.

**The rejection of claims 1, 4-7, 10-12 under 35 U.S.C. 102(b) as being anticipated by 3,986,030 to Teltscher**

**The rejection of claims 1 and 7 on Teltscher whose Figures 1 and 3 have corresponding components contained in these 2 claims.**

Claims 1 and 7 have been rewritten as new claims 13 and 15 which have incorporated the following features from the specification to narrow the claims enough to be patentable over Teltscher's:

- (a) The light beam of this invention is emitted from a handheld device operated by hand while Teltscher's light ray is reflected from an operator's eye.
- (b) Moving the light beam onto a sensor by hand is good enough a selection means for the signal in this invention. There is no need for the suction means or the delay means of a preselected time in Teltscher's invention. This is because the speed, range, and the control of the hand movement are much better than that of the eye. This means is good enough for most people in normal use, good for all people when the light source is very close, or in touch with the sensor surface. The speed gain is significant over Teltscher's.
- (c) The lock switch mechanism has been put into the base claims, which uses a dedicated photodetector and an operating logic to achieve the effect of simultaneous validity of the signals from more than one said photodetectors. Neither the mechanism nor the effect were present in Teltscher's patent.

**The rejection of claims 4 and 10 on Teltscher's shielding means 23 (figure 2) to prevent contamination.**

Claims 4 and 10 have been rewritten as new claims 14 and 16 to explicitly indicate the difference of the contaminations intended. Claims 4 and 10 are for waterproof packaging that are against the contamination from dust, water, and etc to any part of the circuit. The

material of the package can be transparent. Teltscher's means 23 is a light shield to shield the sensor from light radiated by the illumination means 22. His light shield has to be opaque but may not keep out water and dust. It is only to shield the sensor.

**The rejection of claims 5 and 11 for Teltscher's inclusion of filtering 25.**  
These 2 claims are withdrawn.

**The rejection of claims 6 and 12 for Teltscher disclosure of means for audio or visual feedback.**

These 2 claims are withdrawn.

**Claims 1,3, 5-7, 9, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by 6,097,373 to Jakobs.**

**The rejection of claims 1 and 7 on Jakobs (Figure 1) that disclosed an apparatus with components contained in these 2 claims, and means for directing the light beam at specific selective photodetectors (the head of the operator).**

These 2 claims have been rewritten as new claims 13 and 15 with the following features from the specification to narrow the claims enough to be patentable over Jakobs:

- (a) The light source is operated by hand while Jakobs's was by head and secured to a headband.
- (b) The flexibility and control of movement of the hand are good enough such that the movement of the beam onto a sensor is used as the selection means for a signal. Jakobs is using an activation time window (0.5 seconds to 2.5 second), or a user-operable switch port 84 (FIG. 5) to select a signal. The speed gain of this invention is significant over Jakobs'.
- (c) A dedicated photodetector with an operation logic is used as a lock switch that enables the simultaneous validity of signals from multiple sensors in any number. This device and logic process is very different from Jakobs' approach which the examiner cited the Col.7, lines 39-47 of his patent to reject claims 3 and 9. Jacobs associates messages with sensor locations. A single key in his invention can be interpreted as a combination of character string and mouse movements. The key-message associations were defined during an overlay definition process. In this invention, there is no such overlay association between messages and keys. An extra key is used to handle the situation when more than one key need to be activated at the same time. The number of combinations of keys that this invention can handle is not practical by Jakobs approach. In addition, Jakobs approach is for messages, not signals which may or may not be correspondent to the messages he planned in his overlay definition.

**The rejection of claims 5 and 11 on Jakobs disclosure of the inclusion of filtering 54.**  
These 2 claims are withdrawn.

**The rejection of claims 6 and 12 on Jakobs disclosure of means for providing visual feedback to an operator upon generation of each signal from the photodetectors.**  
These 2 claims are withdrawn.

**The rejection of claims 3 and 9 on Jakobs disclosure that the system is equipped to operate in various modes wherein simultaneous validity of signals from more than one photodetectors(Col. 7, lines 39-47).**

These 2 claims have been put into the base claims 13 and 15. See the discussion above.

### **Allowable Subject Matter**

**Claims 2 and 8 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of other claims.**

Claim 2 has been rewritten as claim 18 that includes the amended limitations.

Claim 8 has been rewritten as claim 17 that depends on claim 15 that has been amended to be patentable.

### **Other pertinent prior art that were made of record but not relied upon**

All the prior art in references are for people to operate without using hands. They all need to use either a time delay mechanism or an extra switch for selection of valid signals. None of them uses a dedicated key or a lock mechanism to support the simultaneous validity of signals from multiple entries. These 3 features are unique structure and processes to this invention, the claims based on them should be allowed.

### **Conclusion**

For all of the above amendments and reasons, the applicant submits that the title, specification, and claims of this application are now in proper form, and that the claims all define patentably over the prior art. Therefore, he submits that this application is now in condition for all allowance, which action they respectfully solicit.

### **Conditional Request For Constructive Assistance**

The applicant has amended the title, specification, and claims of this application so that they are proper and define novel structure and processes that are unique and unobvious. If for any reason this application is not believed to be in full condition for allowance, the applicant respectfully requests the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. § 2173.02 and § 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully,



Yong Yan  
P.O. Box 70251  
Sunnyvale, CA 94086  
Tel. (408)732-1038

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Yong Yan, Applicant